

What is claimed is:

1 1. A method of access control in an access network infrastructure
2 connected to a plurality of service networks, comprising the steps of:
3 receiving a host configuration protocol message acknowledging
4 allocation of a network address, associated with a service network, to an
5 authenticated network access device;
6 creating an entry in an address resolution protocol cache using
7 information from the dynamic host configuration protocol message; and
8 restricting access to the access network infrastructure based on the
9 entries in the address resolution protocol cache.

1 2. The invention of claim 1 wherein the host configuration
2 protocol is DHCP.

1 3. The invention of claim 1 wherein the address resolution
2 protocol is ARP.

1 4. The invention of claim 1 further comprising the step of flushing
2 the entry in the address resolution protocol cache if the network address is
3 released by the network access device.

1 5. The invention of claim 1 wherein the entry in the address
2 resolution protocol cache has an expiration time set to an expiration time of the
3 network address allocated to the network access device.

1 6. The invention of claim 1 wherein the service networks utilize
2 the Internet Protocol and wherein the addresses are Internet Protocol addresses.

1 7. The invention of claim 6 wherein the plurality of service
2 networks are operated by different Internet Service Providers.

1 8. The invention of claim 6 wherein the plurality of service
2 networks offer access to different Internet Protocol-based services.